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| Breakout 1: Algebraic Thinking | | Grade |
| 90 minutes | Math Learning Goals   * I will understand the three key patterning concepts (additive, multiplicative, and algebraic thinking) * I will identify the mathematics necessary to respond to students in the moment. | Materials  Teacher journals  Chart paper  Markers  Masking Tape  PPT: Ten Black Dots  Book :Ten Black Dots  Colour Tiles |
|  | 🡪  Nottawasaga: Ice Breaker Activity: In your journal, write a three-digit number that represents you in some way (example: 475 – I am 47 and have 5 people in my family). Also, identify a personal learning goal or two for your week at math CAMPPP. Share at your table. As a table group, identify a three-digit number that represents your group as a whole. Also come up with a group goal. Represent your group goal and your group number on chart paper – be prepared to post and share. Each group shares, then each individual introduces themselves using their three-digit number, and explains how their number relates in some way to the group number.  Kempenfelt: Revisit your three-digit number and goal – create a new three-digit number for yourself that represents your experience at math CAMPPP so far, and revisit your personal goal. Comment on your progress so far. As a group, revisit your chart paper and use graffiti to represent your growth, or create a new three-digit number with explanation on chart paper. Gallery walk and provide written feedback to your colleagues |  |
| Minds On… |
| 30 minutes |
|  | 🡪  Nottawasaga and Kempenfelt: Role Play  Doing the Math: Share the power point of the story *Ten Black Dots*. With a partner, on chart paper, solve the following problem:  How many dots would you need to represent the numbers from 1 to 50?  (This brings the problem, from a primary book, to a junior level.)  How many dots would you need to represent any number? (Making generalizations)  Facilitators will circulate, provide prompts as needed and responding “in the moment”. | afl *Assessment* ***for*** *learning* |
| Action! |
| 30 minutes |
|  | 🡪  Nottawasaga and Kempenfelt: Responding  Facilitators lead a bansho bringing out additive thinking, multiplicative thinking, algebra, generalizations.  Participants are asked to work with a grade team partner, to reflect and discuss: What math do you see?  Where do you see this in our Ontario curriculum?  How did the facilitation get at “responding to students in the moment”? |  |
| Consolidate Debrief |
| 30 minutes |
|  | Home Activity or Further Classroom Consolidation  Nottawasaga and Kempenfelt  Reflect on your experiences today. What supports do you need to have in place in order to respond to students in the moment? What do you still need to know about the three algebraic representations? Write in your journal if you like, or simply think about this. |  |